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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/747,064

12/20/2000

Robert Anderson

19930-000800US

1604

20350

7590

04/01/2004

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EXAMINER

PETKOVSEK, DANIEL J

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/747,064

Applicant(s)

ANDERSON ET AL.

Examiner

Daniel J Petkovsek

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on amendment received January 2, 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 4, 11, and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12-21 and 23-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

This office action is in response to the amendment received January 2, 2004. In accordance with the amendment, claims 1, 8, 15, and 17 have been amended; claims 4, 11, and 22 have been canceled; while new claims 25-27 have been added. The amendments to the specification have been acknowledged.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-10, 12-21, and 23-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Solgaard et al. U.S.P. No. 6,097,859.

Solgaard et al. U.S.P. No. 6,097,859 teaches (ABS, Figs. 1 and 2, column 3, line 54 through column 4, line 23) an optical routing apparatus 10 (and inherent method of using such) comprising: input ports 14 to provide an optical signal, a plurality of output ports 24, each port configured to receive the optical signal, wherein at least two of the outputs (24a, 24b) lie in different parallel planes, each different plane being orthogonal to the path along which the optical signal can be received, and an optical switching arrangement (see Fig. 2) adapted to shift among a plurality of options to direct the input(s) 14 to any of the corresponding outputs 24, which clearly, fully meets Applicant's *claimed* limitations. Regarding independent claim 15, different wavelengths are routable in the device 10 by the use of movable mirrors (46 a-f) for a

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given spectral band, and free-space optical element 16 comprising a dispersive element (grating 42) is taught by Solgaard et al. '859. Regarding claims 2, 3, 9, 10, 20, 21, and 26 all path lengths are approximately equal. Regarding claims 7 and 14, the plurality of outputs can lie in a similar plane. Regarding claims 5, 6, 12, 13, 23, 24 and 27, moveable micro-mirrors (46a-f) exist for the reflection and optical switching properties as claimed, and the movement of a mirror is actuated in a linear manner. Regarding claims 17-19, a focusing lens exists with the diffractive grating in the wavelength router of Solgaard et al. '859.

Regarding new independent claim 25, the orthogonal separation between 14c and 24a compared to the orthogonal separation between 14c and 24b is not an integral multiple, the difference between the two separations are fractionally different (see Fig. 1).

### ***Response to Arguments***

3. Applicant's arguments filed January 2, 2004, have been fully considered but they are not persuasive.

4. Applicant traverses the rejections to newly amended independent claims 1, 8, and 15 by stating that, "at least two output ports be non-coplanar, as illustrated for an embodiment in Fig. 4(a) of the application". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., staggered lengthwise fibers, Fig. 4(a)) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The outputs 24 of Solgaard et al. '859 are clearly oriented in different, parallel to each other, planes.

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Since consideration of staggered lengthwise fibers would necessitate further consideration, the Examiner is silent to the patentability of such an amendment.

5. Applicant states that the Solgaard et al. '859 reference does not teach or reasonably suggest new claims 25-27. Applicant points to Figure 6 of the Solgaard et al. '859 reference, however, Figure 1 clearly shows that the orthogonal separations (from input to output) are not integral multiples of each other. Regarding claims 6, 13, 24, and 27, as a single rotatable mirror moves, it is "linearly actuated" in order to move (actuate) a specific distance and/or angle.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, with respect to the state of the art of optical switching arrangements from input to output fibers: U.S.P. No. 6,668,108 to Helkey et al.

7. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Claims 1-3, 5-10, 12-21, and 23-27 currently are pending and stand rejected under 35 U.S.C. 102 (e) to Solgaard et al. '859. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

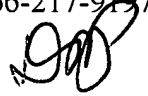
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (571) 272-2355. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J Petkovsek  
Examiner  
Art Unit 2874

March 23, 2004



Brian Healy  
Primary Examiner